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10/573,925	06/08/2007	Satoshi Kitani	286267US6PCT	5363
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EXAMINER VAUGHAN, MICHAEL R				
ART UNIT		PAPER NUMBER		
2431				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/573,925

Applicant(s)

KITANI, SATOSHI

Examiner

MICHAEL R. VAUGHAN

Art Unit

2431

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-52 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 30 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

The instant application having Application No. 10/573925 is presented for examination by the examiner. Examiner acknowledges applicant election to claims 1-52. Claim 53 has been canceled.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been received.

Drawings

Figures illustrating that which is old should be designated by a legend such as -- Prior Art--. Several of the figures such as 1-3, are believed to be only illustrating prior art. However, all figures need this label if they do not show something new of Applicant's invention. Applicant is encouraged to inspect all of the remaining figures and label them accordingly. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 45-52 are rejected under 35 U.S.C. 101 as directed to non-statutory subject matter of software, per se. The claim lacks the necessary physical articles or objects to constitute a machine or manufacture within the meaning of 35 U.S.C. 101. It is clearly not a series of steps or acts to be a process nor is it a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. It is at best, function descriptive material per se. Claims 45-52 lack the necessary requirements for computer readable medium and computer programs to become statutory. Specifically, computer readable medium must have computer instructions embodied thereon, which cause a computer to execute the instructions. The computer must be present in the claim and executing the instructions because without said computer the computer readable medium and program cannot perform any function.

Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” Both types of “descriptive material” are non-statutory when claimed as descriptive material per se, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994).

Merely claiming non-functional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”). See MPEP 2106.01 [R-6].

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-52 are replete with improper antecedent basis. For example claim 1, in the next to last limitation, recites "the third encryption". It is believed to mean the third encryption key. This error shows up in the other independent claims which share this same limitation with claim 1. Similarly, many of the problems are duplicated in the parallel claims. Another example is in claims 13, 23, and 26, where encryption means is defined twice in each claim. The dependent claims are likewise rejected for being dependent of rejected claims. Examiner advises Applicant to carefully check each claim for similar problems which have likely arisen from being a translation from a foreign application. Appropriate correction is required.

As per claim 17, it is unclear what is being encrypted by each key in the last limitation. The phrase "the encrypted and bus-encrypted content information" lacks antecedent basis as well.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-52 are rejected under 35 U.S.C. 102(b) as being anticipated by USP Application Publication 2002/0015494 to Nagai et al., hereinafter Nagai.

As per claims 1, 29, 45, and 49, Nagai teaches a system, method, program, and computer readable medium for having a record and reproduction apparatus **[DVD drive]** that reads information from a record medium and records information thereto, and an information process apparatus **[CPU]** to which the record and reproduction apparatus is connected through transfer means **[bus]**, content information being encrypted according to a content information encryption method using a first encrypted key **[master key]** managed by a management mechanism, a second encrypted key **[disc key]** unique to the record medium, and a third encrypted key **[title key]** generated whenever information is recorded, the content information being recorded to the record medium **[DVD]** (0049-0050),

wherein the record and reproduction apparatus comprises:

storage means for storing the first encrypted key (0055),

second encrypted key decryption means for reproducing the second encrypted key encrypted and recorded on the record medium and for decrypting the second encrypted key with the first encrypted key (0054),

third encrypted key generation means for generating the third encrypted key (0050, 0054),

encryption means for encrypting the third encrypted key with the decrypted second encrypted key (0054),

authentication means for authenticating the information process apparatus and generating a session key when the authentication means has successfully authenticated the information process apparatus (0122),

first bus-encryption means for bus-encrypting the second encrypted key that has been encrypted and recorded on the record medium with the session key and transferring the bus- encrypted second encrypted key to the information process apparatus (0123),

second bus-encryption means for bus-encrypting the third encrypted key with the session key and transferring the bus-encrypted third encrypted key to the information process apparatus (0123),

bus-decryption means for bus-decrypting encrypted and bus-encrypted content information supplied from the information process apparatus (0141), and

record means for recording the third encrypted key and the encrypted content information to the record medium (0064), and

wherein the information process apparatus comprises:

storage means for storing the first encrypted key (0138),

authentication means for authenticating the record and reproduction apparatus and generating the session key when the authentication means has successfully authenticated the record and reproduction apparatus (0139),

first bus-decryption means for bus-decrypting the bus-encrypted second encrypted key with the session key (0141),

decryption means for decrypting the second encrypted key with the first encrypted key (0140),

second bus-decryption means for bus-decrypting the bus-encrypted third encrypted key with the session key (0141),

decryption means for decrypting the third encrypted key with the second encrypted key (undoes the encryption in 0054),

encryption means for encrypting the content information transferred to the record and reproduction apparatus with the third encryption (0127), and

bus-encryption means for bus-encrypting the encrypted content information with the session key and sending the bus-encrypted content information to the record and reproduction apparatus (0127).

As per claims 5, 33, 46, and 50, Nagai teaches an system, method, program, and computer readable medium that reads information from a record medium and records information thereto, and an information process apparatus to which the record and reproduction apparatus is connected through transfer means, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium, wherein the record and reproduction apparatus (0049-0050) comprises:

storage means for storing the first encrypted key (0055),
second encrypted key generation means for generating the second encrypted key (0055),

encryption means for encrypting the generated second encrypted key with the first encrypted key (0054),

third encrypted key generation means for generating the third encrypted key (0050, 0054),

encryption means for encrypting the third encrypted key with the generated second encrypted key (0054),

authentication means for authenticating the information process apparatus and generating a session key when the authentication means has successfully authenticated the information process apparatus (0122),

first bus-encryption means for bus-encrypting the second encrypted key with the session key and transferring the bus-encrypted second encrypted key to the information process apparatus (0123),

second bus-encryption means for bus-encrypting the third encrypted key with the session key and transferring the bus-encrypted third encrypted key to the information process apparatus (0123),

bus-decryption means for bus-decrypting the encrypted and bus-encrypted content information supplied from the information process apparatus (0141), and

record means for recording the second encrypted key, the third encrypted key, and the encrypted content information to the record medium (0064), and

storage means for storing the first encrypted key (0138),

authentication means for authenticating the record and reproduction apparatus and generating the session key when the authentication means has successfully authenticated the record and reproduction apparatus (0139),

first bus-decryption means for bus-decrypting the bus-encrypted second encrypted key with the session key (0141),

decryption means for decrypting the second encrypted key with the first encrypted key (0140),

second bus-decryption means for bus-decrypting the bus-encrypted third encrypted key with the session key (0141),

decryption means for decrypting the third encrypted key with the second encrypted key (undoes the encryption in 0054),

encryption means for encrypting the content information transferred to the record and reproduction apparatus with the third encryption (0127), and

bus-encryption means for bus-encrypting the encrypted content information with the session key and sending the bus-encrypted content information to the record and reproduction apparatus (0127).

As per claims 9, 37, 47, and 51, Nagai teaches an system, method, program, and computer readable medium that reads information from a record medium and records

information thereto, and an information process apparatus to which the record and reproduction apparatus is connected through transfer means, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium, wherein the record and reproduction apparatus (0049-0050) comprises:

storage means for storing the first encrypted key (0055),

second encrypted key decryption means for reproducing the second encrypted key encrypted and recorded on the record medium and for decrypting the second encrypted key with the first encrypted key (0054),

third encrypted key generation means for generating the third encrypted key (0050, 0054),

encryption means for encrypting the third encrypted key with the decrypted second encrypted key (0054),

authentication means for authenticating the information process apparatus and generating a session key when the authentication means has successfully authenticated the information process apparatus (0122),

bus-decryption means for bus-decrypting the bus-encrypted content information supplied from the information process apparatus (0127),

encryption means for encrypting the content information with the third encrypted key (0054, 0064), and

record means for recording the third encrypted key and the encrypted content information to the record medium (0064), and

wherein the information process apparatus comprises:

authentication means for authenticating the record and reproduction apparatus and generating the session key when the information process apparatus has successfully authenticated the record and reproduction apparatus (0139), and

bus-encryption means for bus-encrypting content information transferred to the record and reproduction apparatus with the session key and sending the bus-encrypted content information to the record and reproduction apparatus (0127).

As per claims 13, 41, 48, and 52 Nagai teaches an system, method, program, and computer readable medium that reads information from a record medium and records information thereto, and an information process apparatus to which the record and reproduction apparatus is connected through transfer means, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium, wherein the record and reproduction apparatus (0049-0050) comprises:

storage means for storing the first encrypted key (0055),

second encrypted key generation means for generating the second encrypted key (0055),

encryption means for encrypting the generated second encrypted key with the first encrypted key (0054),

third encrypted key generation means for generating the third encrypted key (0050, 0054),

encryption means for encrypting the third encrypted key with the decrypted second encrypted key (0054),

authentication means for authenticating the information process apparatus and generating a session key when the authentication means has successfully authenticated the information process apparatus (0122),

bus-decryption means for bus-decrypting encrypted and bus-encrypted content information supplied from the information process apparatus (0141), and

encryption means for encrypting the content information with the third encrypted key (0127), and

record means for recording the second encrypted key, the third encrypted key, and the encrypted content information to the record medium (0055), and

wherein the information process apparatus comprises:

authentication means for authenticating the record and reproduction apparatus and generating the session key when the information process apparatus has successfully authenticated the record and reproduction apparatus (0139), and

bus-encryption means for bus-encrypting content information transferred to the record and reproduction apparatus with the session key and sending the bus-encrypted content information to the record and reproduction apparatus (0127).

As per claim 17, Nagai teaches a record and reproduction apparatus **[DVD drive]** that is connected to an information process apparatus **[CPU]** that reads information from a record medium and records information thereto, content information being encrypted according to a content information encryption method using a first encrypted key **[master key]** managed by a management mechanism, a second encrypted key **[disc key]** unique to the record medium, and a third encrypted key **[title key]** generated whenever information is recorded, the content information being recorded to the record medium **[DVD]** (0049-0050), the record and reproduction apparatus comprises:

storage means for storing the first encrypted key (0055),

second encrypted key decryption means for reproducing the second encrypted key encrypted and recorded on the record medium and for decrypting the second encrypted key with the first encrypted key (0054),

third encrypted key generation means for generating the third encrypted key (0050, 0054),

encryption means for encrypting the third encrypted key with the decrypted second encrypted key (0054),

authentication means for authenticating the information process apparatus and generating a session key when the authentication means has successfully authenticated the information process apparatus (0122),

first bus-encryption means for bus-encrypting the second encrypted key that has been encrypted and recorded on the record medium with the session key and

transferring the bus- encrypted second encrypted key to the information process apparatus (0123),

second bus-encryption means for bus-encrypting the third encrypted key with the session key and transferring the bus-encrypted third encrypted key to the information process apparatus (0123),

bus-decryption means for bus-decrypting encrypted and bus-encrypted content information supplied from the information process apparatus (0141), and

record means for recording the third encrypted key and the encrypted content information to the record medium (0064),

wherein the encrypted and bus-encrypted content information is encrypted with the third encrypted key and the encrypted content information is bus-encrypted with the session key generated by the information process apparatus (0141).

As per claim 20, Nagai teaches a record and reproduction apparatus that is connected to an information process apparatus through transfer means and that reads information from a record medium and records information thereto, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium (0049-0050), the record and reproduction apparatus comprising:

storage means for storing the first encrypted key (0055),

second encrypted key generation means for generating the second encrypted key (0054),

encryption means for encrypting the generated second encrypted key with the first encrypted key (0054),

third encrypted key generation means for generating the third encrypted key (0050, 0054),

encryption means for encrypting the third encrypted key with the decrypted second encrypted key (0054),

authentication means for authenticating the information process apparatus and generating a session key when the authentication means has successfully authenticated the information process apparatus (0122),

first bus-encryption means for bus-encrypting the second encrypted key that has been encrypted and recorded on the record medium with the session key and transferring the bus- encrypted second encrypted key to the information process apparatus (0123),

second bus-encryption means for bus-encrypting the third encrypted key with the session key and transferring the bus-encrypted third encrypted key to the information process apparatus (0123),

bus-decryption means for bus-decrypting encrypted and bus-encrypted content information supplied from the information process apparatus (0141), and

record means for recording the third encrypted key and the encrypted content information to the record medium (0064),

wherein the encrypted and bus-encrypted content information is encrypted with the third encrypted key and the encrypted content information is bus-encrypted with the session key generated by the information process apparatus (0141).

As per claim 23, Nagai teaches a record and reproduction apparatus that is connected to an information process apparatus through transfer means and that reads information from a record medium and records information thereto, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium (0049-0050), the record and reproduction apparatus comprising:

storage means for storing the first encrypted key (0055),

second encrypted key generation means for generating the second encrypted key (0055),

encryption means for encrypting the generated second encrypted key with the first encrypted key (0054),

third encrypted key generation means for generating the third encrypted key (0050, 0054),

encryption means for encrypting the third encrypted key with the generated second encrypted key (0054),

authentication means for authenticating the information process apparatus and generating a session key when the authentication means has successfully authenticated the information process apparatus (0122),

bus-decryption means for bus-decrypting encrypted and bus-encrypted content information supplied from the information process apparatus (0141),

encryption means for encrypting the content information with the third encrypted key (0127), and

record means for recording the second encrypted key, the third encrypted key, and the encrypted content information to the record medium (0055),

wherein the bus-encrypted content information is the encrypted content information that has been bus-encrypted with the session key generated by the information process apparatus (0127).

As per claim 26, Nagai teaches a record and reproduction apparatus that is connected to an information process apparatus through transfer means and that reads information from a record medium and records information thereto, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium (0049-0050), the record and reproduction apparatus comprising:

storage means for storing the first encrypted key (0055),

second encrypted key decryption means for reproducing the second encrypted key encrypted and recorded on the record medium and for decrypting the second encrypted key with the first encrypted key (0054),

third encrypted key generation means for generating the third encrypted key (0050, 0054),

encryption means for encrypting the third encrypted key with the decrypted second encrypted key (0054),

authentication means for authenticating the information process apparatus and generating a session key when the authentication means has successfully authenticated the information process apparatus (0122),

bus-decryption means for bus-decrypting the encrypted and bus-encrypted content information supplied from the information process apparatus (0141) encryption means for encrypting the content information with the third encrypted key (0127), and

record means for recording the second encrypted key, the third encrypted key, and the encrypted content information to the record medium (0055),

wherein the bus-encrypted content information is the encrypted content information that has been bus-encrypted with the session key generated by the information process apparatus (0127).

As per claims 2, 6, 10, 14, 18, 21, 24, 27, 30, 34, 38, and 42, Nagai teaches the authentication means of the record and reproduction apparatus and the authentication

means of the information process apparatus mix a random number transferred from the record and reproduction apparatus to the information process apparatus with information about a type of the record medium when the authentication means of the record and reproduction apparatus and the authentication means of the information process apparatus exchange the generated random number data there between (0124).

As per claims 3, 7, 11, 15, 31, 35, 39, and 43, Nagai teaches the authentication means of the record and reproduction apparatus and the authentication means of the information process apparatus mix a random number transferred from the record and reproduction apparatus to the information process apparatus with information about copyright when the authentication means of the record and reproduction apparatus and the authentication means of the information process apparatus exchange the generated random number data there between (0124).

As per claims 4, 12, 19, 25, 32, and 40, Nagai teaches a mask control means for the third encrypted key, wherein only when the authentication means of the record and reproduction apparatus and the authentication means of the information process apparatus have mutually and successfully authenticated each other, the third encrypted key can be written to the record medium (0127).

As per claims 8, 16, 22, 28, 36, and 44, Nagai teaches first mask control means for the third encrypted key, and second mask control means for the second encrypted key, wherein only when the authentication means of the record and reproduction apparatus and the authentication means of the information process apparatus have

mutually and successfully authenticated each other, the third encrypted key and the second encrypted key can be written to the record medium (0127).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is listed on the enclosed PTO-892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL R. VAUGHAN whose telephone number is (571)270-7316. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. R. V./

Examiner, Art Unit 2431

/Syed Zia/

Primary Examiner, Art Unit 2431